

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

- 1-23. (Canceled)
24. (Currently Amended) A method for making an electronic article comprising:
- providing an insulating substrate for the electronic article having an electrical conductor thereon, wherein the insulating substrate ~~need not be~~ is of a material that is not dimensionally stable, wherein the electrical conductor includes first and second contact sites spaced apart substantially a predetermined distance;
  - providing an insulating electronic jumper substrate of a dimensionally stable material and having a length substantially the predetermined distance between first and second opposing ends, having first and second contact sites at the first and second opposing ends thereof, respectively, and having first and second terminals respectively connected to the first and second contact sites thereof;
  - mounting an electronic device to the electronic jumper substrate with first and second contacts of the electronic device connected to the first and second terminals of the electronic jumper substrate; and
  - then mounting the electronic jumper substrate to the insulating substrate with the first and second contact sites of the ~~substrate~~ electronic jumper substrate electrically connecting with the first and second contact sites of the ~~electronic jumper~~ insulating substrate.
25. (Previously Presented) The method of claim 24 further comprising, prior to said mounting an electronic device, applying solder or electrically conductive adhesive to the first and second terminals of the insulating electronic jumper substrate.
26. (Original) The method of claim 25 wherein said mounting an electronic device includes heating the solder or electrically conductive adhesive to a melting

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984

temperature and placing the first and second contacts of the electronic device against the solder or electrically conductive adhesive.

27. (Previously Presented) The method of claim 24 further comprising, prior to said mounting the electronic jumper substrate, applying solder or electrically conductive adhesive to the first and second contact sites of the insulating substrate and/or to the first and second contact sites of the electronic jumper substrate.
28. (Previously Presented) The method of claim 27 wherein said mounting the electronic jumper substrate includes heating the solder or electrically conductive adhesive to a melting temperature and placing the first and second contact sites of the electronic jumper substrate against the solder or electrically conductive adhesive.
29. (Previously Presented) The method of claim 28 wherein said providing an insulating electronic jumper substrate includes providing a substrate of a material that is dimensionally stable at the melting temperature.
30. (Original) The method of claim 28 wherein said providing an insulating substrate includes providing a substrate of a material that is not dimensionally stable at the melting temperature.
31. (Original) The method of claim 24 wherein said providing an insulating substrate comprises forming an elongated electrical conductor defining an antenna connected to the first and second contact sites.
32. (Original) A method for making a plurality of electronic articles comprising:  
providing an insulating substrate having a plurality of electrical conductor patterns thereon, wherein each electrical conductor pattern includes first and second contact sites spaced apart substantially a predetermined distance;

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984

providing an electronic jumper substrate of a dimensionally stable insulating material having a plurality of sets of first and second contacts and first and second terminals thereon, wherein the first and second contacts of each set thereof are spaced apart substantially the predetermined distance;

mounting a plurality of electronic devices to the electronic jumper substrate with first and second contacts of each electronic device connected to one set of first and second terminals of the electronic jumper substrate;

separating the electronic jumper substrate into individual jumpers wherein each individual jumper includes one set of first and second terminals and one electronic device connected thereto, wherein the set of first and second contact sites of each individual jumper are adjacent respective edges of the individual jumper;

then mounting individual jumpers to the insulating substrate with the first and second contact sites of the individual jumper electrically connecting with the first and second contact sites of one electrical conductor pattern of the electronic jumper substrate; and

separating the insulating substrate into individual electronic articles, wherein each individual electronic article includes one conductor pattern and one individual jumper.

33. (Original) The method of claim 32 further comprising, prior to said mounting a plurality of electronic devices, applying solder or electrically conductive adhesive to the first and second terminals of the electronic jumper substrate.
34. (Original) The method of claim 33 wherein said mounting a plurality of electronic devices includes heating the solder or electrically conductive adhesive to a melting temperature and placing the first and second contacts of the plurality of electronic devices against the solder or electrically conductive adhesive.
35. (Original) The method of claim 32 further comprising:  
prior to said separating the electronic jumper substrate, applying solder or

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984

electrically conductive adhesive to the first and second contact sites of the individual jumpers; and/or

prior to said mounting individual jumpers, applying solder or electrically conductive adhesive to the first and second contact sites of the insulating substrate.

36. (Original) The method of claim 35 wherein said mounting individual jumpers includes heating the solder or electrically conductive adhesive to a melting temperature and placing the first and second contact sites of the individual jumpers against the solder or electrically conductive adhesive.
37. (Original) The method of claim 36 wherein said providing an insulating substrate includes providing a substrate of a material that is not dimensionally stable at the melting temperature.
38. (Original) The method of claim 32 wherein said providing an insulating substrate comprises forming an elongated electrical conductor defining an antenna connected to the first and second contact sites.
39. (Original) A method for making a plurality of electronic articles comprising:  
providing an insulating substrate of a material having a plurality of electrical conductor patterns thereon, wherein each electrical conductor pattern includes first and second contact sites spaced apart substantially a predetermined distance;  
providing an electronic jumper substrate of a dimensionally stable insulating material having a plurality of elongated conductors thereon, wherein the pitch of the elongated conductors is substantially the predetermined distance;  
applying a pattern of solder paste or electrically conductive adhesive on each of the elongated conductors, wherein the pattern of solder paste or electrically conductive adhesive includes at least areas at opposite distal ends of each elongated conductor and an area central to each elongated conductor;  
placing a plurality of electronic devices on the electronic jumper substrate

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984

with first and second contacts of each electronic device abutting the pattern of solder paste or electrically conductive adhesive at adjacent distal ends of adjacent ones of the plurality of elongated conductors;

processing the solder paste or electrically conductive adhesive to electrically connect the first and second contacts of each electronic device to the adjacent elongated conductors of the electronic jumper substrate;

separating the electronic jumper substrate into individual jumpers including dividing each elongated conductor and the central area of solder paste or electrically conductive adhesive thereon, wherein each individual jumper includes first and second elongated conductor portions and one electronic device having first and second contacts respectively connected thereto, wherein the divided central solder paste or electrically conductive adhesive area of the first and second elongated conductor portions of each individual jumper are adjacent respective edges of the individual jumper, and wherein each individual jumper has one dimension that is substantially the predetermined distance;

then mounting individual jumpers to the insulating substrate with the divided central solder paste or electrically conductive adhesive areas of the first and second elongated conductor portions of the individual jumper electrically connecting with the first and second contact sites of one electrical conductor pattern of the insulating substrate; and

separating the insulating substrate into individual electronic articles, wherein each individual electronic article includes one conductor pattern and one individual jumper connected thereto.

40. (Original) The method of claim 39 wherein said processing includes heating the solder paste or electrically conductive adhesive to a melting temperature, and/or heating the electrically conductive adhesive to a curing temperature.
41. (Original) The method of claim 39 wherein said mounting individual jumpers includes heating the solder paste or electrically conductive adhesive to a melting

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984

temperature, and/or heating the electrically conductive adhesive to a curing temperature.

42. (Original) The method of claim 41 wherein said providing an insulating substrate includes providing a substrate of a material that is not dimensionally stable at the melting temperature.
43. (Original) The method of claim 39 wherein said providing an insulating substrate comprises forming an elongated electrical conductor defining an antenna connected to the first and second contact sites.
44. (Original) The method of claim 39 wherein said separating the electronic jumper substrate includes either die cutting the electronic jumper substrate or die cutting the electronic jumper substrate by a die contacting the central solder paste or electrically conductive adhesive area.
45. (Original) A method for making a plurality of electronic circuits comprising:
- providing an electronic jumper substrate of a dimensionally stable insulating material having a plurality of elongated conductors thereon, wherein the pitch of the elongated conductors is a predetermined distance;
  - applying a pattern of solder paste or electrically conductive adhesive on each of the elongated conductors, wherein the pattern of solder paste or electrically conductive adhesive includes at least areas at opposite distal ends of each elongated conductor and an area central to each elongated conductor;
  - placing a plurality of electronic devices on the electronic jumper substrate with first and second contacts of each electronic device abutting the pattern of solder paste or electrically conductive adhesive at adjacent distal ends of adjacent ones of the plurality of elongated conductors;
  - processing the solder paste or electrically conductive adhesive to electrically connect the first and second contacts of each electronic device to the adjacent

AI-TECH-15A

PATENT APPLICATION  
Serial No. 10/732,984

elongated conductors of the electronic jumper substrate;

separating the electronic jumper substrate into individual jumpers including dividing each elongated conductor at the central area of solder paste or electrically conductive adhesive thereon, wherein each individual jumper includes first and second elongated conductor portions and one electronic device having first and second contacts respectively connected thereto, wherein the divided central solder paste or electrically conductive adhesive area of the first and second electrical conductor portions of each individual jumper are adjacent respective edges of the individual jumper, and wherein each individual jumper has one dimension that is substantially the predetermined distance.

46. (Original) The method of claim 45 wherein said processing includes heating the solder paste or electrically conductive adhesive to a melting temperature, and/or heating the electrically conductive adhesive to a curing temperature.
47. (Original) The method of claim 45 wherein said separating the electronic jumper substrate includes either die cutting the electronic jumper substrate or die cutting the electronic jumper substrate by a die contacting the central solder paste or electrically conductive adhesive area.
48. (Original) The method of claim 45 further comprising:  
providing an insulating substrate including an elongated electrical conductor defining an antenna connected to first and second contact sites; and  
connecting the divided central solder paste or electrically conductive adhesive areas of the individual jumper to the first and second contact sites of the insulating substrate.
49. (Canceled)

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**